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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/265,946	03/11/99	HUSSEINI	N 032391-002

AMTECH, INC.
BUILDING 9355
STENNIS SPACE CENTER, MS 38529-7099

PM82/0710

EXAMINER

SEMUNEGUS, L

ART UNIT

PAPER NUMBER

3641

DATE MAILED:

07/10/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trad marks

Office Action Summary	Application No. <u>265,946</u> 09/832,626	Applicant(s) HUSSEINI ET AL.	
	Examiner Lulit Semunegus	Art Unit 3641	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

- 1) ☒ Responsive to communication(s) filed on 2/16/2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-115 is/are pending in the application.
- 4a) Of the above claim(s) 59-113 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-58, 114 and 115 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

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pmp

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☐ All b) ☐ Some * c) ☐ None of the CERTIFIED copies of the priority documents have been:
1. ☐ received.
2. ☐ received in Application No. (Series Code / Serial Number) _____.
3. ☐ received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. & 119(e).

Attachment(s)

- | | |
|---|--|
| 15) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 18) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 16) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 19) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 17) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 20) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The indicated allowability of claims 1-2, 5-8, 10-18, 20-21, 23-25, 27-34 and 114-115 are withdrawn in view of the newly discovered reference(s) of Ballreich et al (4,809,612), Boutwell (3,144,827) and Leshner et al (4,726,296). Rejections based on the newly cited reference(s) follow below.
2. The election of species has been withdrawn but restriction requirement still stands for process of making and product made. Therefore, Group 1, identified as including claims 1-58 and 114-115 are considered in this office action.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless - (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 20 and 114-115 are rejected under 35 U.S.C. 102(b) as being anticipated by Ballreich et al (4,809,612). Ballreich et al discloses an ammunition article, comprising: a molded plastic cartridge casing body (1) having a first end and a second end (fig. 1-3); a projectile (7,9) attached to the first end of the cartridge casing body, wherein the cartridge casing body is molded for sufficient strength around at least a portion of the projectile (fig. 1-3, col. 3, lines 33-36); a primer element (3); a propellant powder charge (4); and where the wall thickness of the cartridge casing body follows cannellure contours of the projectile and wall has constant thickness (figs. 1-3).

5. Claims 21, 23-25, 27-28, 30, 37-42, 44-46, 48 and 53 are rejected under 35 U.S.C. 102(b) as being anticipated by Boutwell (3,144,827). Boutwell discloses an ammunition article comprising: a molded plastic cartridge case body (2, col. 2, line 17) having a closed front-end (6) that reduce in thickness and includes a stress concentrator for tearing of the closed front end (col. 1 line 70 to col. 2, line 6); a second end with a base (1) attached where the base is a molded plastic base (col. 2, lines 18-20) which can be replaceable and is attached mechanically by a locking mechanism (3,5); a primer (9); and a propellant charge inside the cartridge casing body (col. 1, lines 68-69).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ballreich et al (4,809,612) in view of Vatsvog (E0131863A1). Ballreich et al teach all the limitations of claim 2 as described above in claim 1, except the second portion of the projectile having a smaller diameter than the first interior portion. Vatsvog teaches a cartridge casing body (10) which includes a first interior portion defined by the portion of the projectile (12) and a second interior portion (16) having a smaller diameter than the first interior portion (fig.2-3) and separated by a shoulder (20). At the time of the invention, it would have been obvious to a person of ordinary skill in the art to have a

smaller diameter second interior portion as shown in Vatsvog for better sealing around the cartridge and to withstand the high gas pressures upon firing of the powder (abstract).

8. Claims 3-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ballreich et al (4,809,612). Ballreich et al disclose all the limitations of claims 3-5 as applied to the claims 1, 20 and 114-115 above, except the projectile is attached to the cartridge casing body by heat bond, by adhesive bond or by flange method. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to attach the projectile to the cartridge casing body by heat bond, adhesive bond or by flange instead of molding as described above in Ballreich (col. 3, lines 33-36) since these methods of attachments are well known in the art.

9. Claims 6-8 and 10-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ballreich et al (4,809,612) in view of Boutwell (3,144,827). Ballreich discloses all the limitations of claims 6-8 and 10-18 as applied to the claims 1, 20 and 114-115 above, except a molded plastic base attached to the second end of the cartridge casing body and is attached to the cartridge casing body by various methods of attachment. Boutwell teaches a base (1) which is attached to the casing body by locking mechanism and includes a propellant charge and primer (9). At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use a plastic base and attach this base with casing body using locking groove (3,5) as taught by Boutwell as well as screw threads, ultrasonic weld, interference fit, adhesive and heat bond since

these methods of attachments are well known in the art and create a reusable and replaceable base.

10. Claims 29, 31-34, 47, 49-52 and 54-58 are rejected under 35 U.S.C. 103(a) as being unpatentable over Boutwell (3,144,827). Boutwell disclose all the limitations of claims 29, 31-34, 47, 49-52 and 54-58 as applied to the claims 21, 23-25, 28, 30, 37-42, 45-46, 48 and 53 above, except the base is attached to the cartridge casing body by various methods of attachment. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to attach a base and casing body using locking groove (3,5) as taught by Boutwell as well as screw threads, ultrasonic weld, interference fit, adhesive and heat bond since these methods of attachments are well known in the art.

11. Claims 9 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable Ballreich et al (4,809,612) in view of Boutwell (3,144,827). Ballreich et al and Boutwell teach the claimed invention as described above in claims 6-8 and 10-18 except for electronic ignition and where the casing body is formed of a combustible material. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use electronic ignition instead of a primer for igniting the propellant for greater accuracy and consistent ignition and use combustible molded material for better sealing around the projectile.

12. Claims 22, 26, 35-36 and 43 are rejected under 35 U.S.C. 103(a) as being over Boutwell (3,144,827). Boutwell teach the claimed invention as described above in claims 21, 23-25, 27-28, 30, 37-42, 44-46, 48 and 53 except for electronic ignition and

Art Unit: 3641

where the casing body is metal or formed of a combustible molded material. At the time of the invention, it would have been obvious to a person of ordinary skill in the art use electronic ignition instead of a primer for igniting the propellant for greater accuracy and consistent ignition and use metal as a casing to withstand the high pressures of powder detonation for moderate amount of reusability and use combustible molded material for better sealing around the projectile.

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Milbank (123,352) teaches a cartridge with first and second section and a projectile attached to the first end of the cartridge casing body, wherein the cartridge casing body is around at least a portion of the projectile (fig. 4). Dumortier (4,192,233) teaches an ultrasonic welding (col. 2, line 29-31) method of attachment between a base (2) and a casing body (1) of a plastic cartridge (abstract).

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lulit Semunegus whose telephone number is (703) 306-5960. The examiner can normally be reached on Mon-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Carone can be reached on (703) 306-4198. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-7687 for regular communications and (703) 305-7687 for After Final communications.

Application/Control Number: 09/832,020^{265,946}
Art Unit: 3641

Page 7

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1113.

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June 28, 2001

Lulit Semunegus
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